WHAT IS CLAIMED IS:

1. An updating system for an encrypted key for a wireless LAN in which one or more wireless access points (APs) are provided on a LAN, said APs being wirelessly connected to one or more wireless access terminal devices (STAs) and in which data is encrypted and transmitted between the AP or APs and the STA or STAs to effect communication (encrypted communication),

said system comprising a key management server (SV) device;

said key management server (SV) device, LAN-connected to the AP, comprising:

SV storage unit for holding k encrypted keys used in the encrypted communication between said AP or APs and the STA or STAs, where k is not less than 1, and

an encrypted key generating unit generating said encrypted key and storing the generated encrypted key in said SV storage unit;

said SV device generating said encrypted key in said encrypted key generating unit to store the generated encrypted key in said SV storage unit, said SV device controlling said encrypted key generating unit to update said encrypted key stored in said SV storage unit to deliver the updated encrypted key to said AP and to said STA or STAs.

2. The updating system for an encrypted key for a wireless LAN as defined in claim 1 wherein

upon updating said encrypted key stored in said SV storage

unit, said SV device generates and updates a sole encrypted key at a time by said encrypted key generating unit.

3. The updating system for an encrypted key for a wireless LAN as defined in claim 1 wherein

upon updating said encrypted key stored in said SV storage unit, said SV device generates a sole encrypted key at a time by said encrypted key generating unit and sequentially updates k encrypted keys stored in said SV storage unit one-by-one at a preset interval.

4. The updating system for an encrypted key for a wireless LAN as defined in claim 1

wherein

said SV device sequentially updates (k - 1) of said k encrypted keys stored in said SV storage unit one-by-one at a preset first interval, said SV device updating the remaining one key at a second interval which is longer than that for said (k - 1) encrypted keys.

5. The updating system for an encrypted key for a wireless LAN as defined in claim 2

wherein

said AP comprises an updating unit updating an nth encrypted key, stored and managed by said AP or APs, on reception of a delivered nth encrypted key updated by said SV device, where $1 \leq n \leq k$, and an encryption unit encrypting an encrypted key updating notification message, using an encrypted key other than

said nth encrypted key, for advising said STA or STAs of that effect;

said STA comprising a key generating unit generating an STA encrypted key updating requesting message on reception of said encrypted key updating notification message from said AP and an encryption unit encrypting said STA encrypted key updating requesting message, using the same encrypted key as that used in said encrypted key updating notification message, to advise said AP of that effect;

said AP also comprising a transmission unit advising said SV device of the STA encrypted key updating request on reception of said STA encrypted key updating requesting message from said STA;

said SV device also comprising a verification unit verifying whether or not an encrypted key may be delivered to said STA on reception of the STA encrypted key updating requesting message from said AP, and a delivery unit delivering to said AP the encrypted key addressed to said STA if it is verified that said encrypted key may be delivered to said STA.

6. The updating system for an encrypted key for a wireless LAN as defined in claim 2

wherein

said AP comprises an updating unit updating an nth encrypted key, stored and managed by said AP or APs, on reception of a delivered nth encrypted key updated by said SV, where 1 ≤

$n \leq k$, and an encryption unit encrypting an encrypted key updating notification message, using an initially updated one of k encrypted keys stored and managed by said AP, to advise said STA of that effect;

said STA comprising a generator unit generating an STA encrypted key updating requesting message on reception of said encrypted key updating notification message from said AP and an encryption unit encrypting said STA encrypted key updating requesting message, using the same encrypted key as that used in said encrypted key updating notification message, to advise said AP of that effect;

said AP also comprising a transmission unit advising said SV device of the STA encrypted key updating request on reception of said STA encrypted key updating requesting message from said STA;

said SV device also comprising a verification unit verifying whether or not an encrypted key may be delivered to said STA on reception of the STA encrypted key updating requesting message from said AP and a delivery unit delivering to said AP the encrypted key addressed to said STA if it is verified that said encrypted key may be delivered to said STA.

7. The updating system for an encrypted key for a wireless LAN as defined in claim 5

wherein

said AP comprises a generator unit generating an STA

encrypted key delivery message on reception of an encrypted key addressed to said STA from said SV device, and

an encryption unit encrypting said STA encrypted key delivery message, using an encrypted key other than the nth encrypted key, to advise said STA of that effect;

said STA also comprising an updating unit updating an nth encrypted key stored and managed by said STA on reception of an nth encrypted key by said STA encrypted key delivery message from said AP.

8. The updating system for an encrypted key for a wireless LAN as defined in claim 6

wherein

said AP comprises a generator unit generating an STA encrypted key delivery message on reception of an encrypted key addressed to said STA from said SV device, and

an encryption unit encrypting said STA encrypted key delivery message, using an encrypted key other than the nth encrypted key, to advise said STA of that effect;

said STA also comprising an updating unit updating an nth encrypted key stored and managed by said STA on reception of an nth encrypted key by said STA encrypted key delivery message from said AP.

9. The updating system for an encrypted key for a wireless LAN as defined in claim 5

wherein

said AP comprises a generator unit generating an STA encrypted key delivery message on reception of an encrypted key addressed to said STA from said SV device, and

an encryption unit encrypting said STA encrypted key delivery message, using an initially updated one of k encrypted keys stored and managed by said AP, to advise said STA of that effect;

said STA also comprising an updating unit updating an nth encrypted key stored and managed by said STA on reception of an nth encrypted key by delivered said STA encrypted key delivery message from said AP.

10. The updating system for an encrypted key for a wireless LAN as defined in claim 6

wherein

said AP comprises a generator unit generating an STA encrypted key delivery message on reception of an encrypted key addressed to said STA from said SV device, and

an encryption unit encrypting said STA encrypted key delivery message, using an initially updated one of k encrypted keys stored and managed by said AP, to advise said STA of that effect;

said STA also comprising an updating unit updating an nth encrypted key stored and managed by said STA on reception of an nth encrypted key by delivered said STA encrypted key delivery message from said AP.

11. The updating system for an encrypted key for a wireless LAN as defined in claim 1

wherein

said STA comprises means for notifying the AP of a lumped STA encrypted key updating requesting message on detection of a preset factor;

said AP comprising means for notifying said SV device of the lumped STA encrypted key updating request on reception of said lumped STA encrypted key updating requesting message from said STA;

said SV device comprising means for verifying whether or not the encrypted key addressed to said STA can be delivered in a lump to said STA on reception of said lumped STA encrypted key updating request from said AP, and

means for delivering encrypted key addressed to said STA in lump to said AP if said verifying means has verified that the encrypted key can be delivered in a lump to said STA;

said AP also comprising means for generating a lumped STA encrypted key delivery message on reception in lump of said encrypted keys addressed to said STA from said SV device, and for notifying said STA of that effect;

said STA also comprising means for updating the encrypted keys stored in said STA in lump on reception of said lumped STA encrypted key delivery message from said AP.

12. An updating method for an encrypted key for a wireless LAN

comprising:

(a) providing one or more wireless access points (APs) provided on a LAN, said APs being wirelessly connected to one or more wireless access terminal devices (STAs) and in which data is encrypted and transmitted between the AP and the STA or STAs to effect communication termed as "encrypted communication",

(b) generating, by a key management server (SV) device, LAN-connected to said AP, k encrypted keys, k being not less than 1, used for encrypted communication between said AP and said STA or STAs,

(c) storing and managing, by said SV device the generated encrypted key,

(d) updating the encrypted key under a preset condition, and

(e) delivering the updated encrypted key to said AP and to said STA or STAs.

13. The updating method for an encrypted key for a wireless LAN as defined in claim 12

wherein

said SV device in updating said k encrypted keys stored and managed by said SV updates said k encrypted keys at a rate of one at a time.

14. The updating method for an encrypted key for a wireless LAN as defined in claim 12

wherein

said SV device in updating said k encrypted keys stored and managed by said SV device sequentially updates said k encrypted keys at a rate of one at a preset time interval.

15. The updating method for an encrypted key for a wireless LAN as defined in claim 12

wherein

said SV device sequentially updates (k - 1) of said k encrypted keys stored in and managed by said SV device one-by-one at a first preset interval, said SV device updating the remaining one key at a second interval longer than for said (k - 1) encrypted keys.

16. The updating method for an encrypted key for a wireless LAN as defined in claim 13

wherein

said AP has encrypted communication with said STA or STAs using an optional encrypted key other than the nth encrypted key stored in and managed by said AP, during a period of time since updating of the nth encrypted key stored in and managed by said AP until the encrypted key is updated next, where $1 \leq n \leq k$.

17. The updating method for an encrypted key for a wireless LAN as defined in claim 13

wherein

said AP has encrypted communication with said STA or STAs, sequentially using (k - 1) encrypted keys, other than the nth encrypted key stored in and managed by said AP, during a period

of time since updating of the nth encrypted key stored in and managed by said AP until next updating of encrypted key, where 1 ≤ n ≤ k.

18. The updating method for an encrypted key for a wireless LAN as defined in claim 13

wherein

said AP has encrypted communication with said STA or STAs, using an initially updated one of k encrypted keys stored in and managed by said AP.

19. The updating method for an encrypted key for a wireless LAN as defined in claim 16

wherein

said STA or STAs has/have encrypted communication with said AP, using an optional one of (k - 1) encrypted keys, other than the nth encrypted key, stored in and managed by said STA or STAs.

20. The updating method for an encrypted key for a wireless LAN as defined in claim 16

wherein

said STA or STAs has/have communication with said AP, sequentially using (k - 1) encrypted keys, other than the nth encrypted key, stored in and managed by said STA or STAs.

21. The updating method for an encrypted key for a wireless LAN as defined in claim 16

wherein

said STA or STAs has/have communication with said AP, using

the last updated one of k encrypted keys stored in and managed by said STA or STAs.